## Message Text

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DEPT PASS TO NASA, OFFICE OF INTERNATIONAL AFFAIRS, FOR SAKSS

E.O. 11652: N/A TAGS: TSPA, JA

SUBJECT: JAPANESE PLANS FOR USE OF BROADCAST SATELLITE (BS)

REF:(A) SAKSS TO MCNEAL TELECON, 10/22, (B) TOKYO A-584

SUMMARY: FOLLOWING INFORMATION PROVIDED IN ANSWER TO QUESTIONS ON USE OF JAPANESE BROADCAST SATELLITE FROM 1977-1980. END SUMMARY.

1. EMBOFF CONTACTED SHIGEMICHI SONOYAMA (HEAD, SERVICE PLANNING AND DEVELOPMENT DIVISION, RADIO REGULATORY BUREAU, MPT) TO ANSWER QUESTIONS ON BS. BROADCAST SATELLITE (BS), WHICH MPT PREFERS TO CALL EXPERIMENTAL BROADCAST SATELLITE, IS PROJECT OF GOJ BEING MANAGED BY MINISTRY OF POSTS AND TELECOMMUNICATIONS (MPT). TECHNICAL DEVELOPMENT AND CONSTRUCTION OF SATELLITE (AS WELL AS THIRD STAGE OF DELTA ROCKET AND APOGEE MOTORS) IS BEING DONE BY NASDA. EXPERIMENTS WILL BE CONDUCTED BY RADIO RESEARCH INSTITUTE (RRI) OF MPT. NHK (JAPAN BROADCASTING CORPORATION), NTT (JAPAN TELEPHONE AND TELEGRAPH: DOMESTIC SERVICE), AND KDD (INTERNATIONAL TELEPHONE AND TELEGRAAPH) ARE COOPERATING ONLY AS REQUIRED, THROUGH TECHNICAL ADVISORY COMMITTEE TO MPT SET UP ABOUT TEN YEARS AGO, MAINLY FOR TECHNICAL CONSULTATIONS ON DEVELOPMENT OF COMMUNICATIONS SATELLITES. NHK HAS A SOMEWHAT LARGER ROLE IN THAT IT IS DEVELOPING GROUND RECEIVERS, WHICH WILL BE PRO-DUCED BY INDUSTRIAL FIRMS.

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2. EVENTUAL AIM OF PROGRAM IS TO DEVELOP DIRECT BROADCASTING

SATELLITE, BUT BS WILL BE FOR TESTING PURPOSES ONLY, NOT BROADCAST OF ACTUAL PROGRAMS. IT WILL BE A WORLD FIRST IN USING 14-15 GIGAHERTZ SIGNALS. IT WILL SHOW MOSTLY STANDARD TEST PATTERNS NOW AVAILABLE. THOUGH SPECIAL MOVING ONES MAY BE USED IN ADDITION TO NORMAL STATIONARY PATTERNS. CONCEPT OF MOVING TEST PATTERNS NOT WELL DEVELOPED YET, BUT MPT IS THINKING IN TERMS OF SPECIAL TEST FILMS OF CARS, TRAINS, OR PEOPLE, AND DOES NOT INTEND TO SHOW ANYTHING SU H AS DRAMS WHICH WOULD BE OF MORE THAN TECHNICAL INTEREST. MPT PLANS TO USE A FEW SCORE RECEIVERS DEVELOPED BY NHK (REFAIR B). SATELLITE'S SHAPED BEAM WILL COVER WHOLE COUNTRY, SO RECEIVERS WILL BE SET UP ALL OVER JAPAN TO COMPARE RECEPTION IN VARIUS AREAS. THERE WILL BE NO SPECIAL EMPHASIS ON ONE AREA. AIM IS TO TEST ABILITY TO PROVIDE TELEVISION COVERAGE TO ISOLATED ISLANDS NOW WITHOUT IT AND TO TEST ABILITY TO OVERCOME URBAN RADIO SHADOW (MULTIPLE IMAGES FROM REFLECTION AND BLOCKING OF TV SIGNALS BY LARGE BUILDINGS). BS WILL CARRY TWO CHANNELS, EACH WITH SOUND. PREDICTED LIFETIME OF BS IS THREE YEARS, ALL OF WHICH WILL BE TAKEN UP WITH AS MANY EXPERIMENTS AS POSSIBLE, BUT NOT WITH PRACTICAL BROADASTING USES.

- 3. PLANS FOR A SECOND BROADCAST SATELLITE, TENTATIVELY TO BE LAUNCHED IN FIRST HALF OF 1980'S, WILL BE DEVELOPED LARGELY ON BASIS OF RESULTS OF BS TESTS.
- 4. FOUR TYPES OF ANTENNAS ARE UNDER CONSIDERATION FOR USE WITH BS. FIRST IS RRI'S 10-15 METER DIAMETER ANTENNA IN KASHIMA, WHICH WILL BE CENTRAL CONTROL STATION. OTHERS WILL BE SEVERAL PORTABLE TYPES OF 4.5-METER DIAMETER, SOME OF WHICH WILL BE ABLE TO SEND AS WELL AS RECEIVE, BUT MOST OF WHICH WILL RECEIVE ONLY.
- 5. 1.5-METER ANTENNAS FOR COMMUNITY USE OF A GROUP OF HOUSEHOLDS WILL REQUIRE FURTHER DEVELOPMENT. EVENTUALLY, MPT HOPES TO DEVELOP 0.8-METER ANTENNAS FOR RECEPTION AT INDIVIDUAL HUSES. TETS TO BE RUN ON BS, THOUGH, ARE TO DETERMINE LIMITS OF CAPABILITY OF BS, AND WILL NOT INVOLVE ANY DISTRIBUTION OF SIGNALS TO HOUSEHOLDS.

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6. SONOYAMA CONCLUDED BY COMMENTING THAT AIMS OF BS DIFFER FROM THOSE OF US'S ATS-6 AND CANADA'S CTS SATELLITES, WHICH ARE FOR REMOTE COUNTRYSIDE. BECAUSE ABOUT 98 PERCENT OF JAPANESE HOUSEHOLDS IS WELL COVERED BY EXISTING NHK AND PRIVATE TV STATIONS (FACILITIES FOR WHICH INCLUDE COMMUNITY ANTENNAS DISTRIBUTING SIGNAL BY CABLE IN SOME AREAS), EXPANSION OF COVERAGE NOT IMPORTANT. RATHER, BS WILL BE USED TO SOLVE QUESTIONS OF URBAN RADO SHADOW AND ISOLATED

ISLANDS. EVENTUALLY, IMPROVEMENT OF QUALITY OF SIGNAL
RECEPTION MAY RESULT, BUT THAT IS NOT IMMEDIATE PURPOSE.
HODGSON

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Reference: A) SAKSS TO MCNEAL TELECON, 10/22, (, B) TOKYO A-584

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